

In Response to the Office Action:

REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH:

Claims 1–14, 16–28, and 30–33 stand rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. Applicant respectfully traverses this rejection and requests that the Examiner reconsider and withdraw the above rejections in view of the following remarks.

The specification discloses that an animal is sufficiently confined so that the animal is substantially stationary, *i.e.* standing still, while being measured as opposed to walking or moving along a path. One embodiment of the disclosed invention is constructed to allow a single animal to enter, **stand**, and exit the disclosed system one at a time. (Specification, paragraph 0027.) The specification discloses the measuring system may be constructed of sidewalls with a posterior door and an anterior door attached to the sidewalls. (*Id.*) The posterior door and anterior door are shown as 16 and 18 respectively in Figures 1, 2A, 3A, and 3B. The doors allow the operator of the system to control the entry and exit of an animal into and out of the system. Further, an embodiment of the present disclosure includes “an adjustable flap to block anterior advancement of a smaller animal and to keep the caudal region of the animal near the posterior door.” (*Id.*) Thus, the caudal region of the animal is substantially stationary. Further, the specification discloses that other devices, such as hydraulics or compressed air, may be used to position the animal within the measuring system. (*Id.*) The animal is only allowed to exit the measuring system after the measurements have been obtained. (Specification, paragraph 0029.) After the animal exits the measuring system, the animal can then enter a squeeze chute moving to

a drafting or sorting pen. (Specification, paragraph 0031.) Figures 2A, 2B, 4B, and 5 illustrate that the animal's legs are relatively stationary to obtain length measurements between the front and rear legs. Applicant respectfully submits that the specification discloses that the animal is substantially stationary while being measured, rather than moving through a pathway and chute area. Therefore, the Applicant respectfully requests that the Examiner reconsider and withdraw the § 112, first paragraph, rejection of claims 1–14, 16–28, and 30–33.

REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH:

Claims 1–14, 16–28, and 30–33 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully traverses this rejection and requests that the Examiner reconsider and withdraw the above rejections in view of the following remarks.

The Applicant respectfully traverses the Examiner's assertion that "substantially stationary" is a relative term which renders the claim indefinite. As discussed above, the specification discloses that the animal is sufficiently confined as to be substantially stationary or standing still while being measured. One of ordinary skill, having the benefit of the disclosure, would recognize that the limitation "substantially stationary" requires that the animal be sufficiently confined so that the animal is stationary or close to stationary, *i.e.* not walking or moving with respect to the measuring area, while being measured. Further, the term "substantially" does not render the claims indefinite. *See Amhil Enterprises Ltd. v. Wawa, Inc.*, 81 F.3d 1554, 1562 (Fed. Cir. 1996) (holding that the limitation "substantially vertical face" meant a vertical face or very close to a vertical face); *Pannu v. Iolab Corp.*, 155 F.3d 1344 (Fed.

Cir. 1998) (affirming district court's construction that the limitation requiring two elements to be "substantially coplanar" meant that there could be up to ten degrees between the two "coplanar" elements.) For at least these reasons, Applicant respectfully requests that the Examiner reconsider and withdraw the § 112, second paragraph, rejection of claims 1–14, 16–28, and 30–33.

FIRST REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1–4, 7–14, 16–24, 26–28, and 30–33 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 5,483,441 to Scofield ("Scofield") in view of WO99/76731 to Doyle ("Doyle"). Applicant requests that the Examiner reconsider and withdraw the above rejections in view of the following remarks.

The fundamental basis for an obviousness determination under 35 U.S.C. §103(a) was set forth by the Supreme Court in *Graham v. John Deere Co.*, 383 US 1; 148 U.S.P.Q. 459 (1966). In subsequent cases involving a determination of obviousness under 35 U.S.C. §103, the Federal Circuit has noted that the following basic tenets of patent law must be adhered to: 1) the claimed invention must be considered as a whole; 2) the references must be considered as a whole and must suggest the desirability and, thus, the obviousness of making the combination; 3) the references must be viewed without the benefit of impermissible hindsight vision afforded by the claimed invention; and 4) reasonable expectation of success is the standard with which obviousness is determined. *Hodosh v. Block Drug Co., Inc.*, 786 F.2d 1136, 1143 n.5, 229 U.S.P.Q. 182, 187, n.5 (Fed. Cir. 1986) (emphasis added). All of the claim limitations must be taught in order to establish obviousness. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974).

As noted above, the references must be considered as a whole and **must suggest the desirability and, thus, the obviousness of making the combination.** (Emphasis Added.) Scofield discloses a system to evaluate an animal based on visual images while the animal is moving through a chute. As noted by the Examiner, "Scofield does not disclose the use of a first ultrasound transducer arranged substantially vertical to the animal to determine an approximate

height of a second portion of the animal.” (Final Office Action, p. 5.) Applicant respectfully traverses the Examiner’s assertion that there is a suggestion to combine Scofield with Doyle.

The measuring system disclosed in Doyle “is adapted to be fitted to known animal handling facilities such as **holding** chutes and/or animal crushes.” (Doyle col. 5, ll. 28–30 Emphasis added.) The Applicant traverses the Examiner’s characterization that “chute” is interchangeable with “holding chute.” Specifically, the “chute” as disclosed in Scofield is not interchangeable with the “holding chute” as disclosed in Doyle. The “holding chute” disclosed in Doyle includes a front and a rear gate. (Doyle col. 7, ln. 45-46.) The purpose of the holding chute is to allow only one animal within the measuring space. (Doyle col. 7, ln. 46–47.) After the animal has been measured, the front gate of the holding chute is opened allowing the animal to exit. (Doyle col. 8, ln. 23–25.) In fact, Doyle specifically states that “a holding chute maintains or blocks an animals’ entry into a crush.” (Doyle col. 5, ln. 30–31.) Additionally, the preferred device of Doyle is fitted to a conventional cattle holding chute in which the animal is **contained**. (Doyle col. 7, ln. 42–44.) The fact that Doyle discloses a system for measuring a stationary animal is further evidenced that when measuring an animal while in a crush a pressure sensor may be used to trigger the transducer; the pressure sensor indicates when the animal was being held, and thus not in motion. (Doyle col. 8, ll. 34–36.)

Although the cameras in Scofield may take pictures simultaneously as indicated by the Examiner, Scofield is expressly directed to “an animal evaluation system that permits an animal being evaluated to move during evaluation rather than being relatively immobilized.” (Scofield col. 1, ln. 11–13.) Applicant respectfully asserts that Scofield does require the animal to traverse through a specified area large enough for the animal to walk through. In fact, the Scofield system is dependent upon motion of the animal as each independent claim of Scofield is expressly directed to an animal **moving through first and second scenes**. Further, the claims in Scofield are directed to evaluating the changes in the configuration of the animal due to the movement of the animal. Scofield notes that prior measurement methods, such as manually measuring the animals, involved restraining the animal in a pen or cage. (Scofield col. 2, ln. 3–4.) Further, Scofield alleges superiority over prior measurement systems because the prior systems required

the relative immobilization of the animal, which prevents rapid sequential measurements of animals. (Scofield col. 2, ln. 12–43.)

The chute disclosed in Scofield is not a holding chute as set forth in Doyle. In fact, Scofield specifically teaches away from using a holding chute. Scofield alleges that previous inferior measuring systems typically immobilized the animal in a chute, not much larger than the animal. (Scofield col. 2, ll. 12–15.) Scofield also notes, “various height and width measurements of an animal can be obtained from the contemporaneous scene image representations made **as the animal moves** through the chute.” (Scofield col. 5, ll. 62–64 Emphasis Added.) Thus, the chute of Scofield must be much larger than the animal and must allow the animal to move through the chute. Further, the chute in Scofield cannot include a posterior door and an anterior door if the animal is to move through first and second scenes. The chute disclosed in Scofield does not block the movement of the animal as taught in Doyle, but instead includes a passageway that allows for the animal to continue along the passageway while being evaluated. (Scofield col. 3, ll. 29–32.) As discussed above, the chute disclosed in Doyle is a holding chute that has a front and rear gate to allow only one animal within the measuring space. Thus, Scofield and Doyle do not suggest the desirability and thus, the obviousness of making the combination as Scofield is explicitly directed at measuring an animal while it moves through a chute while Doyle teaches confining the animals in a holding chute or crush.

Further, the transducer taught in Doyle, which is used to measure stationary animals, would not work with Scofield because Scofield discloses a system for measuring an animal while moving down a chute. This is further evidenced by the disclosure of ultrasound transducers in Scofield, which is used to detect when an animal enters and exits the chute, *i.e.* movement of the animal. In fact, the ultrasound transducers are use to trigger the cameras to capture an image of the animal when the animal has traveled within the field of view of the cameras. Even though Scofield was obviously familiar with ultrasound transducers, Scofield does not utilize such a transducer to make physiological measurements of the animal. Instead, Scofield requires capturing a visual image on video of the animal in two different scenes made possible by the movement of the animal.

For at least these reasons, Applicant respectfully requests that the Examiner reconsider and withdraw the § 103(a) rejection of independent claims 1 and 20.

Claims 2–4, 7–14, 16–19, 21–24, 26–28, and 30–33 depend from claims 1 and 20 and thus, incorporate each limitation therein. Therefore, claims 2–4, 7–14, 16–19, 21–24, 26–28, and 30–33 are allowable for at least the same reason as independent claims 1 and 20. Applicant therefore respectfully requests that the Examiner also reconsider and withdraw the rejection of claims 2–4, 7–14, 16–19, 21–24, 26–28, and 30–33.

Additionally, Scofield does not disclose, teach, or suggest the claimed invention in independent claim 20. Specifically, independent claim 20 requires “means for obtaining an image of at least a portion of one or more legs of the animal.” Scofield instead discloses obtaining an image of the upper lateral posterior portion and an image of a partial dorsal view of the animal. Scofield discloses a front side wall with an opening located such that a camera may obtain an image of only the upper lateral posterior portion of the animal. The image of the upper lateral posterior portion of the animal does not include at least a portion of one or more legs as shown in Figures 2A–2E of Scofield. Additionally, at least a portion of one or more of the legs is not obtained from the partial dorsal view of the animal as shown in Figures 3A–3I of Scofield. Additionally, Doyle does not disclose, teach, or suggest “means for obtaining an image of at least a portion of one or more legs of the animal.”

For at least these reasons, Applicant respectfully requests that the Examiner reconsider and withdraw the § 103(a) rejection of independent claim and 20. Claims 21–24, 26–28, and 30–33 depend from claim 20 and thus, incorporate each limitation therein. Therefore, claims 21–24, 26–28, and 30–33 are allowable for at least the same reason as independent claim 20. Applicant therefore respectfully requests that the Examiner also reconsider and withdraw the rejection of claims 21–24, 26–28, and 30–33.

SECOND REJECTION UNDER 35 U.S.C. § 103(a):

Claims 1–3, 7–13, 20–23, and 25 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 4,939,574 to Petersen et al. (“Petersen”) in view of Doyle. Applicant requests that the Examiner reconsider and withdraw the above rejections in view of the following remarks.

The applicable case law for a rejection under 35 U.S.C. § 103(a) has been discussed above in the response to the first rejection under 35 U.S.C. § 103(a). In the interests of brevity, Applicant requests the Examiner to note the above section and consider that material incorporated herein by reference.

As noted above, the references must be considered as a whole and **must suggest the desirability and, thus, the obviousness of making the combination.** (Emphasis Added.) Petersen discloses a system for measuring certain aspects of a carcass, such as fat content. As noted by the Examiner, "Petersen does not disclose the use of a first ultrasound transducer arranged substantially vertical to the animal to determine an approximate height of a second portion of the animal." (Final Office Action, p. 8.) Applicant respectfully traverses the Examiner's assertion that there is a suggestion to combine Petersen with Doyle.

As noted by the Examiner, Doyle teaches "the use of an ultrasound transducer arranged substantially vertical to the animal **for the purpose of determining an approximate height of a portion of an animal** for measuring the height irrespective of the relative vertical location of the pelvis relative to the length of the animal." (Emphasis Added.) (Final Office Action, p. 5.) Doyle teaches the use of an ultrasound transducer to measure the height of a portion of a stationary, live animal standing in a holding chute. The transducer in Doyle is generally directed to the pelvis area of the animal while it is standing and is used to measure the pelvic height and width of the animal. The transducer of Doyle transmits an ultrasonic wave which bounces off the frame of the animal, in particular the pelvis. The height history off the animal may be used to determine the growth of the animal and may aid in the determination of the optimal time to slaughter the animal.

Petersen discloses a system for measuring certain aspects of a carcass, such as fat content. Petersen deals with carcasses, which are hung on a hook in front of a dark background and a video picture is taken. There is no motivation to combine Doyle with Petersen for at least three reasons discussed below.

First, the geometry of the carcass disclosed in Petersen is distorted since the carcass is mechanically supported, such as being hung from a hook, rather than standing on its own. The ultrasound transducer transmits ultrasonic waves that bounce off the geometric dimensions of the

animal to measure its height and width. The measurements produced by the ultrasound transducer may not be accurate with the distorted geometry of the carcass.

Second, one of ordinary skill in the art would not arrange an ultrasonic transducer substantially vertical to the carcass. Petersen deals with measuring the carcass for characteristics such as fat content of the carcass. Doyle discloses the use of an ultrasonic transducer to measure the growth of an animal over time. Likewise, the present invention uses an ultrasonic transducer in combination with an optical device to determine animal characteristics by measuring the growth of an animal over a period of time. The ultrasonic transducer disclosed in Doyle does not penetrate the skin of the animal and thus, Doyle could not be combined with Petersen to successfully determine the fat content of a carcass.

Ultrasound units have been used to estimate subcutaneous fat of an animal, but rather than being substantially vertical to the animal the ultrasound unit is typically placed **directly on the animal** at specific anatomical points. (Doyle col. 50–57.) This type of measurement requires multiple direct contact measurements taken at specific locations during the same measuring period. The protein, fat, and bone content at these particular points can then be determined through the extrapolation of the differences of ultrasound wave signals of the measurements. In order to determine the subcutaneous and/or intra-muscular fat content of animal, a large number of direct contact individual measurements would be required at different anatomical points. Thus it would be quite time consuming and labor intensive to measure body fat by this method. Doyle teaches placing the transducer above the animal and not in direct contact with the animal. Likewise, independent claim 1 requires that the ultrasonic transducer “arranged substantially vertical to the animal.” Further, Petersen even teaches away from using an ultrasonic device to determine fat content. (Petersen col. 3, ln. 29–37.) Thus, one of ordinary skill in the art would not combine Doyle with Petersen to measure the characteristics of a carcass.

Finally, the ultrasonic transducer disclosed in Doyle is used for the purpose of determining an approximate height of a portion of an animal. The height of an animal is “the distance extending from the lowest point to the highest point of an animal body esp. of a human body in a natural standing position.” WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 1050 (2002). As discussed above, Petersen deals with measuring carcasses for characteristics such as

fat content. A carcass does not have a “natural standing position” and thus does not have a height as contemplated by Doyle. Further, independent claims 1 and 20 each require determining the approximate height or “natural standing position” of an animal.

For at least these reasons, Petersen and Doyle do not suggest the desirability and thus, the obviousness of combining the two references. Applicant respectfully requests that the Examiner reconsider and withdraw the § 103(a) rejection of independent claims 1 and 20.

Claims 2–3, 7–13, 21–23, and 25 depend from claims 1 and 20 and thus, incorporate each limitation therein. Therefore, claims 2–3, 7–13, 21–23, and 25 are allowable for at least the same reason as independent claims 1 and 20. Applicant therefore respectfully requests that the Examiner also reconsider and withdraw the rejection of claims 2–3, 7–13, 21–23, and 25.

THIRD REJECTION UNDER 35 U.S.C. § 103(a):

Claim 5 and 6 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Petersen in view of U.S. Patent 6,639,352 to Eom (“Eom”). Applicant requests that the Examiner reconsider and withdraw the above rejections in view of the following remarks.

The applicable case law for a rejection under 35 U.S.C. § 103(a) has been discussed above in the response to the first rejection under 35 U.S.C. § 103(a). In the interests of brevity, Applicant requests the Examiner to note the above section and consider that material incorporated herein by reference.

As discussed above, independent claim 1 is not disclosed, taught, or suggested by Petersen. In fact, the Examiner admits that Petersen alone does not disclose, teach, or suggest the invention of independent claim 1. Eom also does not disclose, teach, or suggest the invention of independent claim 1. Claims 5 and 6 each depends from independent claim 1 and thus necessarily incorporates each limitation therein. Therefore, claims 5 and 6 are allowable for at least the same reasons as independent claim 1. Applicant therefore respectfully requests that the Examiner also reconsider and withdraw the rejection of claims 5 and 6.

FOURTH REJECTION UNDER 35 U.S.C. § 103(a):

Claims 14 and 33 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Petersen in view of U.S. Patent 4,785,817 to Stouffer (“Stouffer”). Applicant requests that the Examiner reconsider and withdraw the above rejections in view of the following remarks.

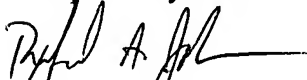
The applicable case law for a rejection under 35 U.S.C. § 103(a) has been discussed above in the response to the first rejection under 35 U.S.C. § 103(a). In the interests of brevity, Applicant requests the Examiner to note the above section and consider that material incorporated herein by reference.

As discussed above, independent claims 1 and 20 are not disclosed, taught, or suggested by Petersen. In fact, the Examiner admits that Petersen alone does not disclose, teach, or suggest the invention of independent claims 1 and 20. Stouffer also does not disclose, teach, or suggest the invention of independent claims 1 and 20. Claims 14 and 33 depend from independent claims 1 and 20, and thus necessarily incorporate each limitation therein. Therefore, claims 14 and 33 are allowable for at least the same reasons as independent claims 1 and 20. Applicant therefore respectfully requests that the Examiner also reconsider and withdraw the rejection of claims 14 and 33.

For at least the reasons presented above, Applicant respectfully requests that the rejection of claims 1-14, 16-28, and 30-33 be reconsidered and withdrawn and that the Examiner indicate the allowance of the claims in the next paper from the Office.

Applicant invites the Examiner to contact the undersigned attorney by telephone to discuss any issues or questions presented by this paper.

Respectfully submitted,



Rexford A. Johnson

Patent Attorney

Reg. No. 57,664

Tel. (713) 787-1697

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